

# AIR POLLUTION CONTROL PERMIT TO CONSTRUCT

Pursuant to Chapter 23.1-06 of the North Dakota Century Code, and the Air Pollution Control Rules of the State of North Dakota (Article 33.1-15 of the North Dakota Administrative Code), and in reliance on statements and representations heretofore made by the owner designated below, a Permit to Construct is hereby issued authorizing such owner to construct and initially operate the source unit(s) at the location designated below. This Permit to Construct is subject to all applicable rules and orders now or hereafter in effect of the North Dakota Department of Environmental Quality (Department) and to any conditions specified below:

#### I. General Information:

A. **Permit to Construct Number**: ACP-18165 v1.0

B. Source:

1. Name: Pronghorn Compressor Station

2. Location: NE ¼, Sec. 14, T147N, R97W

Dunn County, ND

3. Source Type: Natural Gas Compressor Station

4. Equipment at the Facility:

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Five Waukesha P9394GSI Series 5 natural gas-fired engines (4SRB) rated at 2,492 bhp each (2022, JJJJ, ZZZZ)	C-1 through C-5	C-1 through C-5	Non-selective catalytic reduction (NSCR)
Six 400-barrel fixed-roof condensate storage tanks	TK-1 through TK-6 A, B	FL-1	Submerged fill pipe (SFP) & Flare
Two 400-barrel fix-roof produced water storage tanks	WTK-1 & WTK-2 A	FL-1	SFP & Flare

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Air Pollution Control Equipment
Process and emergency flare	FL-1	FL-1	
Condensate truck loading	TL-1	TL-1	Submerged fill arm
Fugitive emissions (OOOOa)	FUG	FUG	Leak detection and repair program (LDAR)

- A Storage tanks are registered under the Department's Guidance Policy for Establishing Legally and Practically Enforceable Emission Limits for Storage Vessels of Oil, Condensate and Produced Water to have a 5.99 ton per year per tank emission limit and are thus not subject sources under 40 CFR 60, Subpart OOOOa per §60.5365a(e).
- B Tanks TK-1 and TK-4 are flash tanks.

# C. Owner/Operator (Permittee or Permit Applicant):

1. Name: ONEOK Rockies Midstream, L.L.C.

2. Address: 100 W Fifth Street

Tulsa, Oklahoma 74103

3. Application Date: August 4, 2022

Revised February 14, 2023

#### **II. Conditions:**

This Permit to Construct allows the construction and initial operation of the above-mentioned new or modified equipment at the source. The source may be operated under this Permit to Construct until a Permit to Operate is issued unless this permit is suspended or revoked. The source is subject to all applicable rules, regulations, and orders now or hereafter in effect of the North Dakota Department of Environmental Quality and to the conditions specified below.

A. **Emission Limits**: Emission limits from the operation of the source unit(s) identified in Item I.B of this Permit to Construct (hereafter referred to as "permit") are as follows. Source units not listed are subject to the applicable emission limits specified in the North Dakota Air Pollution Control Rules.

Emission Unit Description	Emission Unit (EU)	Emission Point (EP)	Pollutant / Parameter	Emission Limit
_			NOx	0.80 g/hp-hr or 58 ppmvd <sup>A, B</sup>
	C-1	C-1	СО	0.63 g/hp-hr or 75 ppmvd <sup>A, B</sup>
Natural gas- fired engines	through C-5	through C-5	VOC	0.10 g/hp-hr or 21 ppmvd <sup>A, B</sup>
_	C-3	C-3	Formaldehyde D	0.015 g/hp-hr
			Opacity	20% <sup>c</sup>
Process and emergency flare	FL-1	FL-1	Opacity/ Design & Operation	0%/ Condition II.B
Condensate truck loading	TL-1	TL-1	VOC	20 tons per year Condition II.C
Fugitive emissions	FUG	FUG	VOC	Condition II.D.2

- A Compliance determined via emissions testing. Ppmvd limits are set @ 15% O<sub>2</sub>
- B Less restrictive 40 CFR 60 Subpart JJJJ limits also apply as follows: NOx of 1.0 g/hp-hr or 82 ppmvd @ 15% O<sub>2</sub>; CO of 2.0 g/hp-hr or 270 ppmvd @ 15% O<sub>2</sub>; VOC of 0.7 g/hp-hr or 60 ppmvd @ 15% O<sub>2</sub>.
- <sup>C</sup> 40% opacity is permissible for not more than one six-minute period per hour.
- Emissions of formaldehyde are not included in the VOC emissions, per §60.4241(h).
  - A. **Fuel Restriction**: Natural gas-fired engines (EU C-1 through C-5) are restricted to combusting only natural gas containing no more than 2 grains of sulfur per 100 standard cubic feet.

### B. Flare Restrictions (EU FL-1):

1. The flare shall be designed and operated with no visible emissions except for periods not to exceed a total of five minutes during any two consecutive hours. Reference Method 22 of 40 CFR 60, Appendix A shall be used to determine compliance with this visible emissions provision.

- 2. The flare shall be operated with a flame present at all times when gas may be directed to the flare. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. If a continuous burning pilot is not installed, the flare must be equipped and operated with an automatic ignitor as outlined in NDAC 33.1-15-07-02.
- 3. The permittee shall monitor the flare to ensure that it is operated and maintained in conformance with the manufacturer designs and specifications.
- 4. When it is necessary to operate the flare during emergency, malfunction or maintenance, all precautions shall be taken to minimize emissions and maintain compliance with the applicable ambient air quality standards as outlined in NDAC 33.1-15-02.
- C. **Condensate Loadout (EU TL-1) VOC Emissions**: To comply with the 20 tons VOC per year (12-month rolling average) limit, the permittee is limited to 250,000 barrels per year (12-month rolling average) of condensate loadout. For compliance demonstration, the permittee shall track the monthly condensate loadout.

If condensate loadout exceeds 250,000 barrels in any 12-month period, the permittee shall notify the Department by the 25<sup>th</sup> day of the month after the 12-month rolling average loadout rate was exceeded. The permittee shall also initiate action to control EU TL-1 VOC emissions in accordance with Department policy<sup>1</sup> if this limit is exceeded.

- D. **New Source Performance Standards (NSPS)**: The permittee shall comply with all applicable requirements of the following NSPS subparts, in addition to Subpart A, as referenced in Chapter 33.1-15-12 of the North Dakota Air Pollution Control Rules and 40 CFR 60.
  - 1. <u>40 CFR 60, Subpart JJJJ</u> Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (EU C-1 through C-5).
  - 2. <u>40 CFR 60, Subpart OOOOa</u> Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification or Reconstruction Commenced After September 18, 2015 (EU FUG). The compressors driven by EU C-1 through C-5 are also subject to this subpart.
- E. **National Emissions Standards for Hazardous Air Pollutants (NESHAP)**: The permittee shall comply with all applicable requirements of the following NESHAP subparts, in addition to Subpart A, as referenced in Chapter 33.1-15-22 of the North Dakota Air Pollution Control Rules and 40 CFR 63.

<sup>&</sup>lt;sup>1</sup> See February 3, 2020 Compliance Requirements for Condensate Truck Loadout Emissions. Available at: https://www.deq.nd.gov/publications/AQ/policy/PC/Cond Loadout Memo.pdf

1. <u>40 CFR 63, Subpart ZZZZ</u> - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (EU C-1 through C-5). The North Dakota Department of Environmental Quality has not adopted the area source provisions of this subpart. Please send all required reports and documentation to EPA Region 8 at the address listed below.

U.S. EPA Region 8 1595 Wynkoop Street Mail Code 8ENF-AT Denver, CO 80202-1129

F. **Stack Heights**: The stack height of each natural gas-fired engine (EU C-1 through C-5) and the flare (EU FL-1) shall be at least 1.5 times the nearby building height. A nearby building is any building located a distance of less than five times the building height from the stack.

# G. Emissions Testing:

1. <u>Initial Testing</u>: Within 180 days after initial startup, the permittee shall conduct emissions tests at the emission units listed below using an independent testing firm, to determine the compliance status of the facility with respect to the emission limits specified in Condition II.A. Emissions testing shall be conducted for the pollutant(s) listed below in accordance with EPA Reference Methods listed in 40 CFR 60, Appendix A.

Emission Unit Description	Emission Point (EP)	Pollutant	Number of Runs	Length of Run
Natural gas-fired engines		$NO_X$	3	60 min.
	C-1 through C-5	СО	3	60 min.
		VOC	3	60 min.
		Formaldehyde	3	60 min.

A signed copy of the test results shall be furnished to the Department within 60 days of the test date. The basis for this condition is NDAC 33.1-15-01-12 which is hereby incorporated into this permit by reference. To facilitate preparing for and conducting such tests, and to facilitate reporting the test results to the Department,

the permittee shall follow the procedures and formats in the Department's Emission Testing Guideline<sup>2</sup>.

- 2. <u>Notification</u>: The permittee shall notify the Department using the form in the Emission Testing Guideline, or its equivalent, at least 30 calendar days in advance of any tests of emissions of air contaminants required by the Department. If the permittee is unable to conduct the performance test on the scheduled date, the permittee shall notify the Department at least five days prior to the scheduled test date and coordinate a new test date with the Department.
- 3. <u>Sampling Ports/Access</u>: Sampling ports shall be provided downstream of all emission control devices and in a flue, conduit, duct, stack or chimney arranged to conduct emissions to the ambient air.

The ports shall be located to allow for reliable sampling and shall be adequate for test methods applicable to the facility. Safe sampling platforms and safe access to the platforms shall be provided. Plans and specifications showing the size and location of the ports, platform and utilities shall be submitted to the Department for review and approval.

# 4. Other Testing:

a) The Department may require the permittee to have tests conducted to determine the emission of air contaminants from any source, whenever the Department has reason to believe that an emission of a contaminant not addressed by the permit applicant is occurring, or the emission of a contaminant in excess of that allowed by this permit is occurring. The Department may specify testing methods to be used in accordance with good professional practice. The Department may observe the testing. All tests shall be conducted by reputable, qualified personnel. A signed copy of the test results shall be furnished to the Department within 60 days of the test date.

All tests shall be made and the results calculated in accordance with test procedures approved by the Department. All tests shall be made under the direction of persons qualified by training or experience in the field of air pollution control as approved by the Department.

<sup>&</sup>lt;sup>2</sup> See February 7, 2020, North Dakota Department of Environmental Quality Division of Air Quality Emissions Testing Guidelines. Available at: https://www.deq.nd.gov/publications/AQ/policy/PC/Emission Testing Guide.pdf

- b) The Department may conduct tests of emissions of air contaminants from any source. Upon request of the Department, the permittee shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices, as may be necessary for proper determination of the emission of air contaminants.
- H. **Organic Compounds Emissions**: The permittee shall comply with all applicable requirements of NDAC 33.1-15-07 Control of Organic Compounds Emissions.
  - 1. The stationary VOC storage tanks (EU TK-1 through TK-6) and the produced water tanks (EU WTK-1 and WTK-2) shall be equipped and operated with a submerged fill pipe in accordance with NDAC 33.1-15-07-01.3.
  - 2. The condensate truck loadout (EU TL-1) shall be equipped and operated with a submerged filling arm or other vapor emission control system in accordance with NDAC 33.1-15-07-01.4. Any emissions control system utilized must have a minimum control efficiency necessary to meet the requirements of chapters 33.1-15-02 and 33.1-15-16.
  - 3. All rotating pumps and compressors handling VOCs must be equipped and operated with properly maintained seals designed for their specific product service and operating conditions in accordance with NDAC 33.1-15-07-01.5.
- I. **Best Management Practices**: At all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.
- J. Construction: Construction of the above described facility shall be in accordance with information provided in the permit application as well as any plans, specifications and supporting data submitted to the Department. The Department shall be notified ten days in advance of any significant deviations from the specifications furnished. The issuance of this Permit to Construct may be suspended or revoked if the Department determines that a significant deviation from the plans and specifications furnished has been or is to be made.

Any violation of a condition issued as part of this permit to construct as well as any construction which proceeds in variance with any information submitted in the application, is regarded as a violation of construction authority and is subject to enforcement action.

K. **Startup Notice**: A notification of the actual date of initial startup shall be submitted to the Department within 15 days after the date of initial startup.

- L. **Like-Kind Engine Replacement**: This permit allows the permittee to replace an existing compressor engine with a like-kind engine. Replacement is subject to the following conditions:
  - 1. The Department must be notified within 10 days after change-out of the engine.
  - 2. The replacement engine shall operate in the same manner, provide no increase in throughput and have equal or less emissions than the engine it is replacing.
  - 3. The date of manufacture of the replacement engine must be included in the notification. The facility must comply with any applicable federal standards (e.g. NSPS, MACT) triggered by the replacement.
  - 4. The replacement engine is subject to the same state emission limits as the existing engine in addition to any NSPS or MACT emission limit that is applicable. Testing shall be conducted to confirm compliance with the emission limits within 180 days after start-up of the engine.
- M. **Permit Invalidation**: This permit shall become invalid if construction is not commenced within eighteen months after issuance of such permit, if construction is discontinued for a period of eighteen months or more; or if construction is not completed within a reasonable time.
- N. **Fugitive Emissions**: The release of fugitive emissions shall comply with the applicable requirements in NDAC 33.1-15-17.
- O. **Annual Emission Inventory/Annual Production Reports**: The permittee shall submit an annual emission inventory report and/or an annual production report upon Department request, on forms supplied or approved by the Department.
- P. **Source Operations**: Operations at the installation shall be in accordance with statements, representations, procedures and supporting data contained in the initial application, and any supplemental information or application(s) submitted thereafter. Any operations not listed in this permit are subject to all applicable North Dakota Air Pollution Control Rules.
- Q. **Alterations, Modifications or Changes**: Any alteration, repairing, expansion, or change in the method of operation of the source which results in the emission of an additional type or greater amount of air contaminants or which results in an increase in the ambient concentration of any air contaminant, must be reviewed and approved by the Department prior to the start of such alteration, repairing, expansion or change in the method of operation.

- R. **Air Pollution from Internal Combustion Engines**: The permittee shall comply with all applicable requirements of NDAC 33.1-15-08-01 Internal Combustion Engine Emissions Restricted.
- S. **Recordkeeping**: The permittee shall maintain any compliance monitoring records required by this permit or applicable requirements. The permittee shall retain records of all required monitoring data and support information for a period of at least five years from the date of the monitoring sample, measurement, report or application. Support information may include all calibration and maintenance records and all original strip-chart recordings/computer printouts for continuous monitoring instrumentation, and copies of all reports required by the permit.
- T. **Nuisance or Danger**: This permit shall in no way authorize the maintenance of a nuisance or a danger to public health or safety.
- U. **Malfunction Notification**: The permittee shall notify the Department of any malfunction which can be expected to last longer than twenty-four hours and can cause the emission of air contaminants in violation of applicable rules and regulations.
- V. **Operation of Air Pollution Control Equipment**: The permittee shall maintain and operate all air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions.
- W. **Transfer of Permit to Construct**: The holder of a permit to construct may not transfer such permit without prior approval from the Department.
- X. **Right of Entry**: Any duly authorized officer, employee or agent of the North Dakota Department of Environmental Quality may enter and inspect any property, premise or place at which the source listed in Item I.B of this permit is located at any time for the purpose of ascertaining the state of compliance with the North Dakota Air Pollution Control Rules. The Department may conduct tests and take samples of air contaminants, fuel, processing material, and other materials which affect or may affect emissions of air contaminants from any source. The Department shall have the right to access and copy any records required by the Department's rules and to inspect monitoring equipment located on the premises.
- Y. **Other Regulations**: The permittee of the source unit(s) described in Item I.B of this permit shall comply with all State and Federal environmental laws and rules. In addition, the permittee shall comply with all local burning, fire, zoning, and other applicable ordinances, codes, rules and regulations.

- Z. **Permit Issuance**: This permit is issued in reliance upon the accuracy and completeness of the information set forth in the application. Not withstanding the tentative nature of this information, the conditions of this permit herein become, upon the effective date of this permit, enforceable by the Department pursuant to any remedies it now has, or may in the future have, under the North Dakota Air Pollution Control Law, NDCC Chapter 23.1-06.
- AA. **Odor Restrictions**: The permittee shall not discharge into the ambient air any objectionable odorous air contaminant which is in excess of the limits established in NDAC 33.1-15-16.
- BB. **Sampling and Testing**: The Department may require the permittee to conduct tests to determine the emission rate of air contaminants from the source. The Department may observe the testing and may specify testing methods to be used. A signed copy of the test results shall be furnished to the Department within 60 days of the test date. The basis for this condition is NDAC 33.1-15-01-12 which is hereby incorporated into this permit by reference. To facilitate preparing for and conducting such tests, and to facilitate reporting the test results to the Department, the permittee shall follow the procedures and formats in the Department's Emission Testing Guideline.

FOR THE NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY

Date:	By	
		James L. Semerad
		Director
		Division of Air Quality